DeMaria, Eva

From: SUTTER Jennifer <SUTTER.Jennifer@deq.state.or.us>
Sent: Tuesday, October 20, 2015 9:55 AM
To: DeMaria, Eva
Cc: Michael Allen (allenmc@cdmsmith.com); Sheldrake, Sean; SUTTER Jennifer
Subject: RE: Topsoil import material data

Eva
Again, thanks for the quick turnaround on this. I wanted to respond to each of the issues raised in the comments you provided.

1. **Verify that 5-point composite was collected as described in the remedial design work plan.**
   As previously indicated via email, 5-point composite samples were collected according to the protocols described in the RD work plan from each of two piles of the materials that would be mixed to create the required physical characteristics for the topsoil (one sandy loam and one compost). The sample was composited by the lab in the proportion (1 part compost, 4 parts sandy loam) needed to meet the physical requirements. The mix was not created in advance because the provider did not want to create the mixture without knowing whether it would be determined acceptable.
2. **Detections or laboratory MRLs exceeded PH RAO 9.**
   Aside from the import criteria exceedances for select dioxins/furans, constituent detections and MDLs met the import criteria established in the remedial design work plan, the majority of which are based on standard analytical detection limits. While some exceedances of RAO 9 may have been indicated, it should be noted that this material will be placed above the 100-year flood level and will be covered with an erosion control blanket and planted. Consequently, erosion into the river is highly unlikely. The dioxin/furan exceedances were considered by calculating the TEQs reflecting risk to mammals, fish, and birds. Based on this evaluation, concentrations did not appear elevated over what is typically considered background.
3. **Holding times were exceeded for semivolatiles and pesticides.**
   Unfortunately, holding times were exceeded when the contractor was considering other fill sources. However, the samples were kept refrigerated for the entire time and are expected to be representative of the import material which was sitting in piles outside during this time.

Based on these considerations, DEQ approved use of the import material as topsoil in the berm.
Please feel free to call if you would like to discuss.

Jennifer Sutter
Project Manager, DEQ NWR Cleanup and Tanks
700 NE Multnomah St., Suite #600,
Portland, OR 97232.
(503) 229-6148

From: DeMaria, Eva [mailto:DeMaria.Eva@epa.gov]
Sent: Tuesday, October 13, 2015 5:31 PM
To: SUTTER Jennifer
Cc: Michael Allen (allenmc@cdmsmith.com); Sheldrake, Sean
Subject: Re: Topsoil import material data

Hi Jennifer-

I've attached our comments. Please note these were made for fast turnaround so I haven't had the opportunity to fully review. We can discuss tomorrow morning, if necessary. Thanks.

Eva

From: SUTTER Jennifer <SUTTER.Jennifer@deq.state.or.us>
Sent: Tuesday, October 13, 2015 3:52 PM
To: DeMaria, Eva
Subject: RE: Topsoil import material data

Thanks Eva
FYI I'm attaching the input I received from one of our toxicologists.
Jennifer

From: DeMaria, Eva [mailto:DeMaria.Eva@epa.gov]
Sent: Tuesday, October 13, 2015 3:48 PM
To: SUTTER Jennifer
Subject: Fw: Topsoil import material data

Hi Jennifer-

We won't be able to provide our comments until 4:30 earliest, hopefully 5 latest.

Eva

From: DeMaria, Eva
Sent: Tuesday, October 13, 2015 2:19 PM
To: SUTTER Jennifer
Subject: Re: Topsoil import material data

Hi Jennifer-

We'll try to get you feedback by that time too. Thanks.

Eva

From: SUTTER Jennifer <SUTTER.Jennifer@deq.state.or.us>
Sent: Tuesday, October 13, 2015 10:11 AM
To: DeMaria, Eva
Subject: FW: Topsoil import material data

Hi Eva
Let me know if you have any concerns with using this material as berm backfill at Evraz Oregon Steel. I'm looking at it now and wanted to get this to you right away since work will stop today if they can't use this material. I plan to give them my feedback by 4 pm this afternoon.

Thanks!

Jennifer Sutter
Project Manager, DEQ NWR Cleanup and Tanks
700 NE Multnomah St., Suite #600,
Portland, OR 97232.
(503) 229-6148

From: Craig Heimbucher [mailto:cheimbucher@integral-corp.com]
Sent: Tuesday, October 13, 2015 10:00 AM
To: SUTTER Jennifer
Cc: Drew Gilpin (Drew.Gilpin@evrazna.com); Debbie Deetz Silva (Debbie.Deetz.Silva@evrazna.com); Mike Byers (mike.byers@creteconsulting.com); Linda Baker; Jamie Stevens (jamie.stevens@creteconsulting.com); Jane Sund
Subject: Topsoil import material data

Jennifer,

We are requesting DEQ concurrence on the use of topsoil mix consisting of compost from S & H Landscape Supply (part of BES stormwater mix previously tested and approved) and sandy loam from the Molalla River (referred to as Topsoil #2). The mix ratio is 1 part compost to 4 parts sandy loam and the textural analysis of the Topsoil #2 meets the physical requirements of the planting design.

A pre-mixed topsoil sample, collected as a 5-point composite, was analyzed for chemical criteria. All chemical criteria met the goals identified in the design report except selected dioxin/furan (D/F). The detected concentrations are relatively low as discussed below (all data is attached). Five noncarcinogenic PAHs (butyl benzyl phthalate, benz(a)anthracene, fluoranthene, phenanthrene and pyrene) were detected at concentrations below the design report goals and below applicable JSCS and EPA draft PRGs. In addition, one SVOC was not detected but had a detection limit slightly above the goal identified in the design report (benzoic acid: import goal was 2000 ug/kg and reporting limit was 2090 ug/kg).

Please review the attached summary tables and information below on dioxin/furan, and let us know if you concur that the Topsoil #2 is acceptable for use as the planting substrate on the riverbank berm. The topsoil will be used on the top/front of the berm and will be 2 foot thick for a total volume of up to 2,000-4,000 cy. The soil on the newly constructed berm will be covered by an erosion control blanket (coconut fiber jute mat) and planted.

In order to prevent a delay in construction, we would appreciate a response on Topsoil #2 today. We are currently analyzing a third topsoil source (Topsoil #3) and expect results next week. We will be using Topsoil #2 pending results of Topsoil #3. If Topsoil #3 is considered acceptable, we plan to switch to from using Topsoil #2 to Topsoil #3.

Dioxin/Furan

The Topsoil #2 D/F results that exceed import goals in the design report are all slightly less than the D/F results of the BES stormwater mix that was approved for use by DEQ.

Four D/F congeners exceeded their import goal (based on the reporting limit) as follows:

	SH-Composite (9/14/15) (pg/g; ng/kg)	Import Criteria (pg/g; ng/kg)	mammalian TEF (unitless)
	RESULT		
1,2,3,4,6,7,8-Hepta CDD	**76.3**	2.5	0.01
1,2,3,4,6,7,8-Hepta CDF	**6.77**	2.5	0.01
Octa CDD	**857**	5	0.0003
Octa CDF	**24.2**	5	0.0003

TEQs calculated with 3 treatments of NDs and 3 TEFs.

1.7	0.7	0.5	2.3	1.4	1.9	2.0	1.1	1.2	ng TEQ/kg dw
ND=0			ND=1/2RL			ND=RL			
mammalian 2005	fish	bird	mammalian 2005	fish	bird	mammalian 2005	fish	bird	

As the table shows, these concentrations/TEQs are below:

1. JSCS toxicity SLV for 2,3,7,8 TCDD = 9 ng/kg dw.
2. EPA draft FS RAO 1 PRG for human direct contact = 10 ng TEQ/kg dw.
3. Puget Sound DMMP open water disposal for non-dispersive sites = 4 ng TEQ/kg dw.
4. ODEQ Ecological toxicity SLVs and RBCs.

Some concentrations/TEQ exceed bioaccumulative-based screening level values and draft PRGs. However, this material will be above the 100-year flood plain (not in the water) and as noted above, measures are being taken to prevent erosion.

Please let me know if you have any questions.

Thanks,

Craig Heimbucher, P.E. | Senior Engineer
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